

# Internet Environment

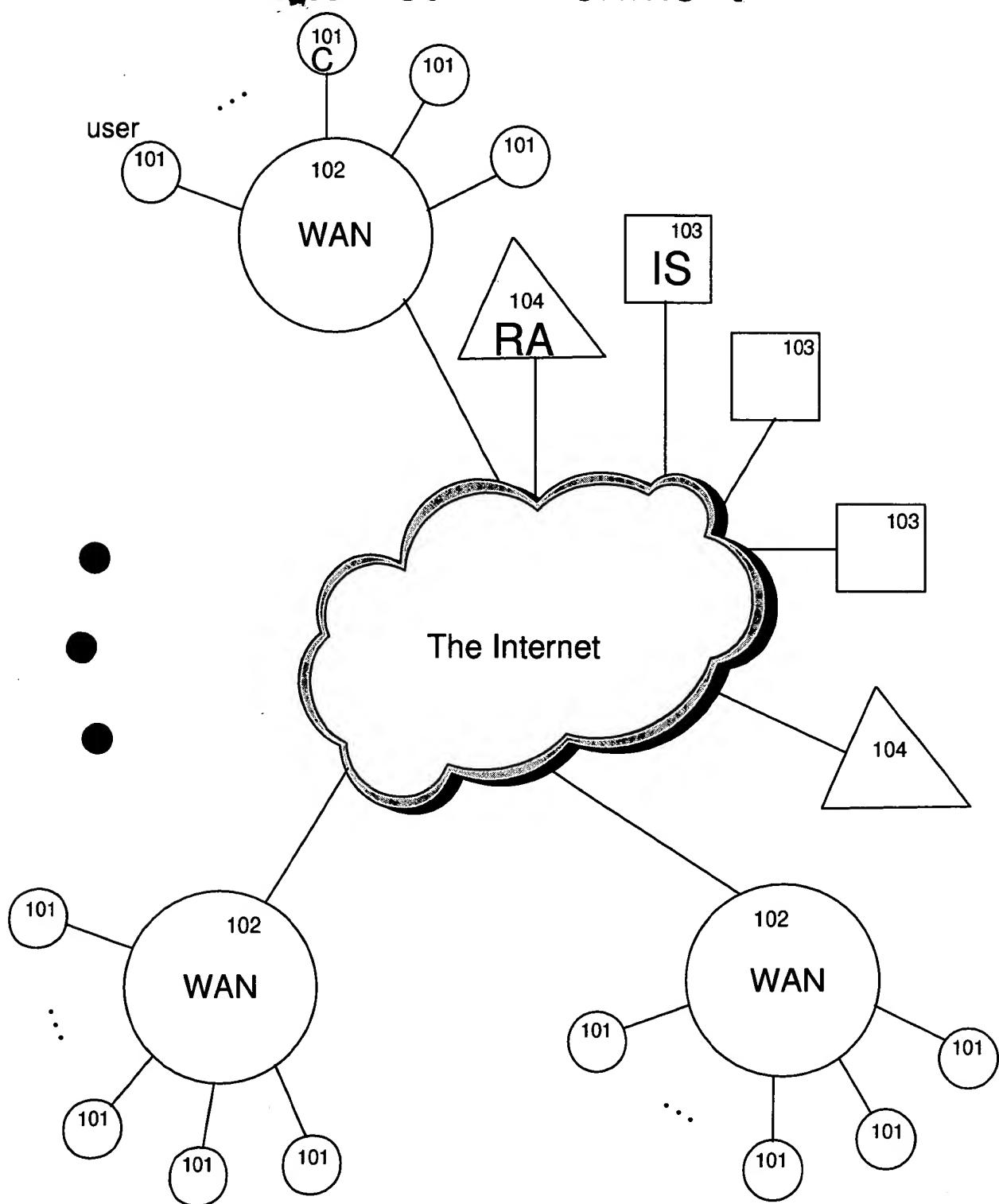


Figure 1

# Relationship Analyzer

105

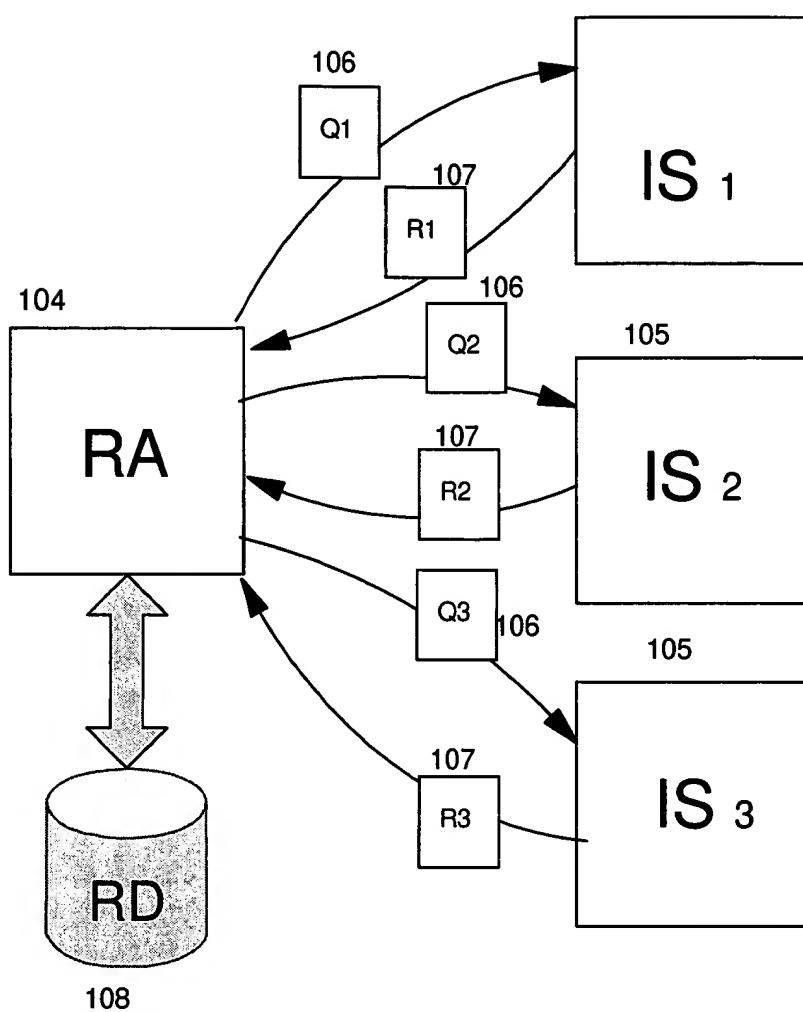


Figure 2

# Modify/Filter Query

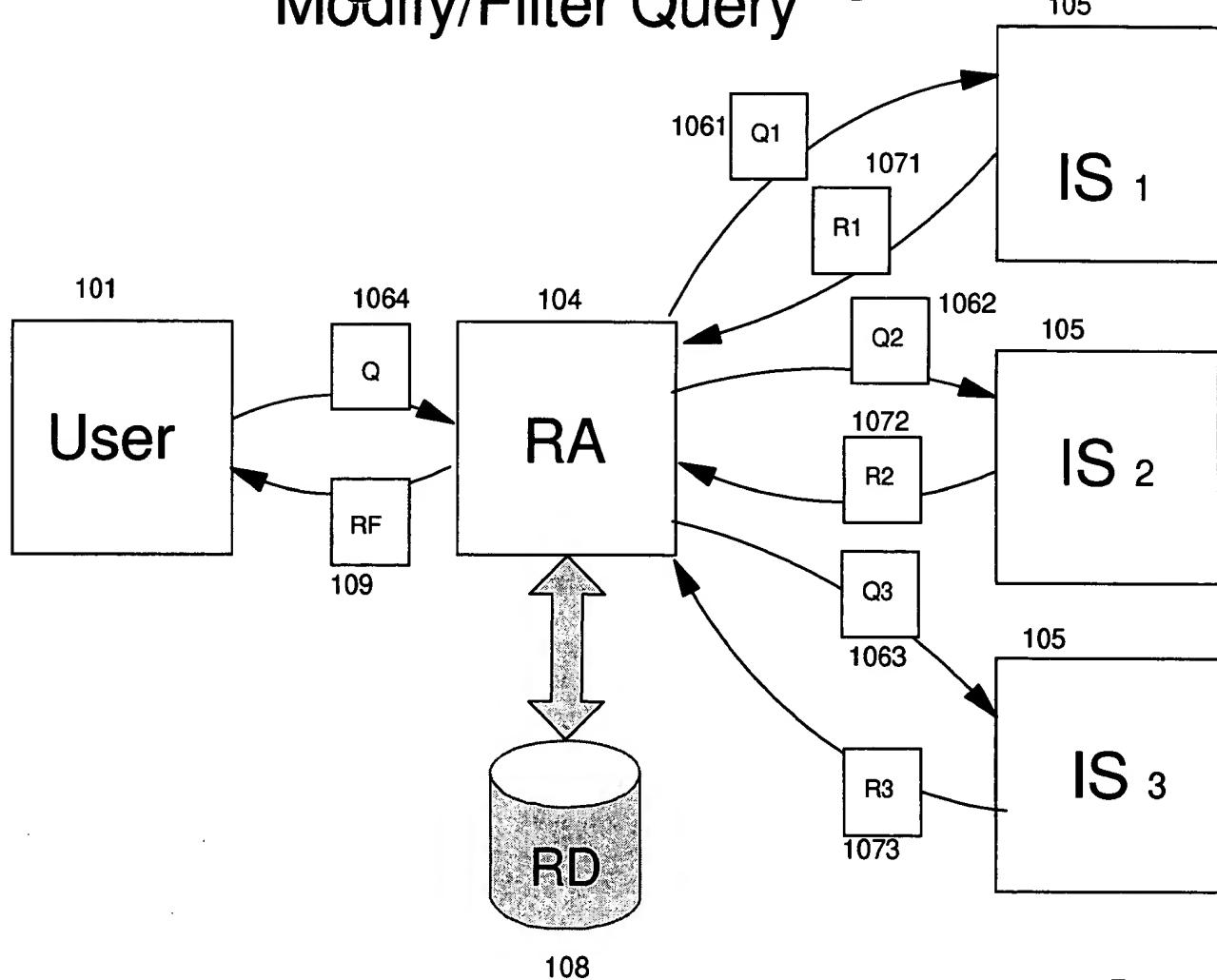


Figure 3

# Example - Combine Results

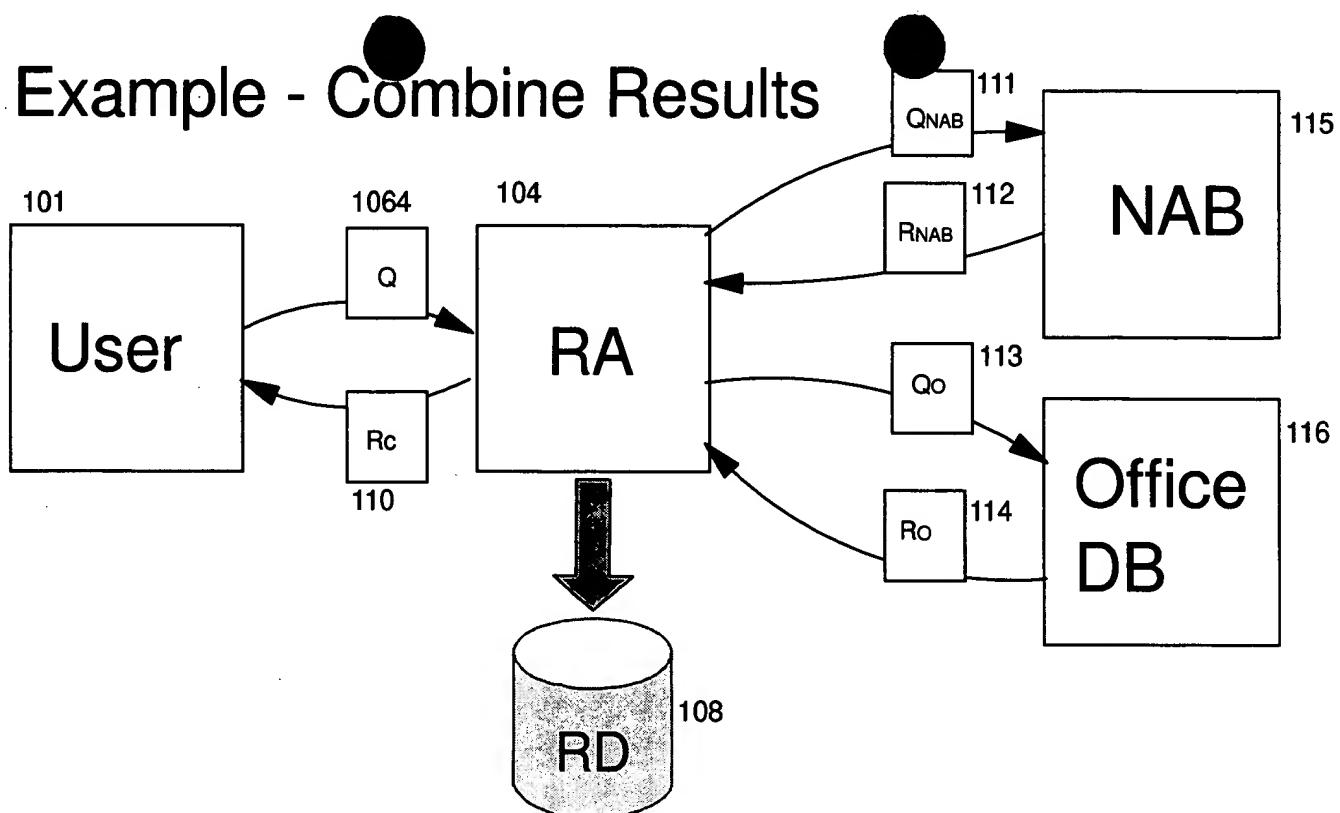


Figure 4A

## RNAB - Response from NAB

John Q Smith	John Q Smith/SalesDivision/XYZCorp
John Q Smith	John Q Smith/MktgDivision/XYZCorp

114

## Ro - Response from Office DB

John Q Smith	Florida
John Q Smith	New York

110

## Rc - Combined Response

John Q Smith	John Q Smith/SalesDivision/XYZCorp	Florida
John Q Smith	John Q Smith/MktgDivision/XYZCorp	New York

Figure 4B

# Example - Priority-Order Results

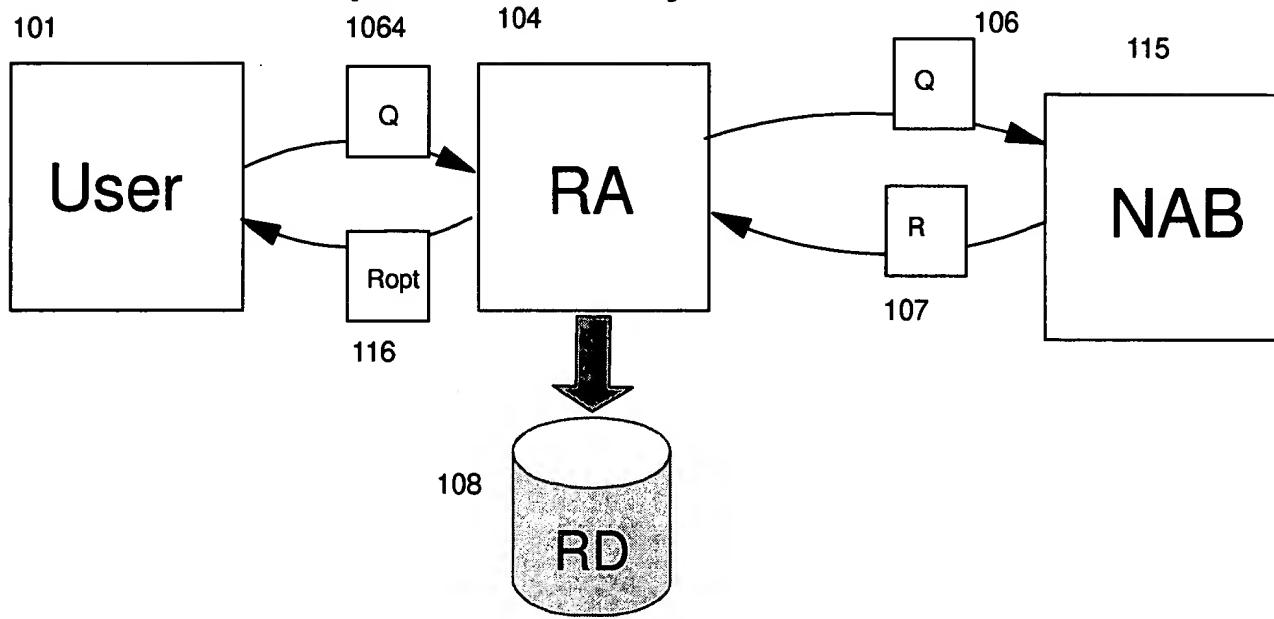


Figure 5A

Query - on behalf of George A Jones/MktgDivision/XYZCorp

e-mail name for **John Smith?**

1064

Response

John Q Smith	John Q Smith/SalesDivision/XYZCorp
John P Smith	John P Smith/MktgDivision/XYZCorp

107

1080 Relationship Data - for George A Jones/MktgDivision/XYZCorp

John Q Smith/SalesDivision/XYZCorp	10
John P Smith/MktgDivision/XYZCorp	20

1081

1082

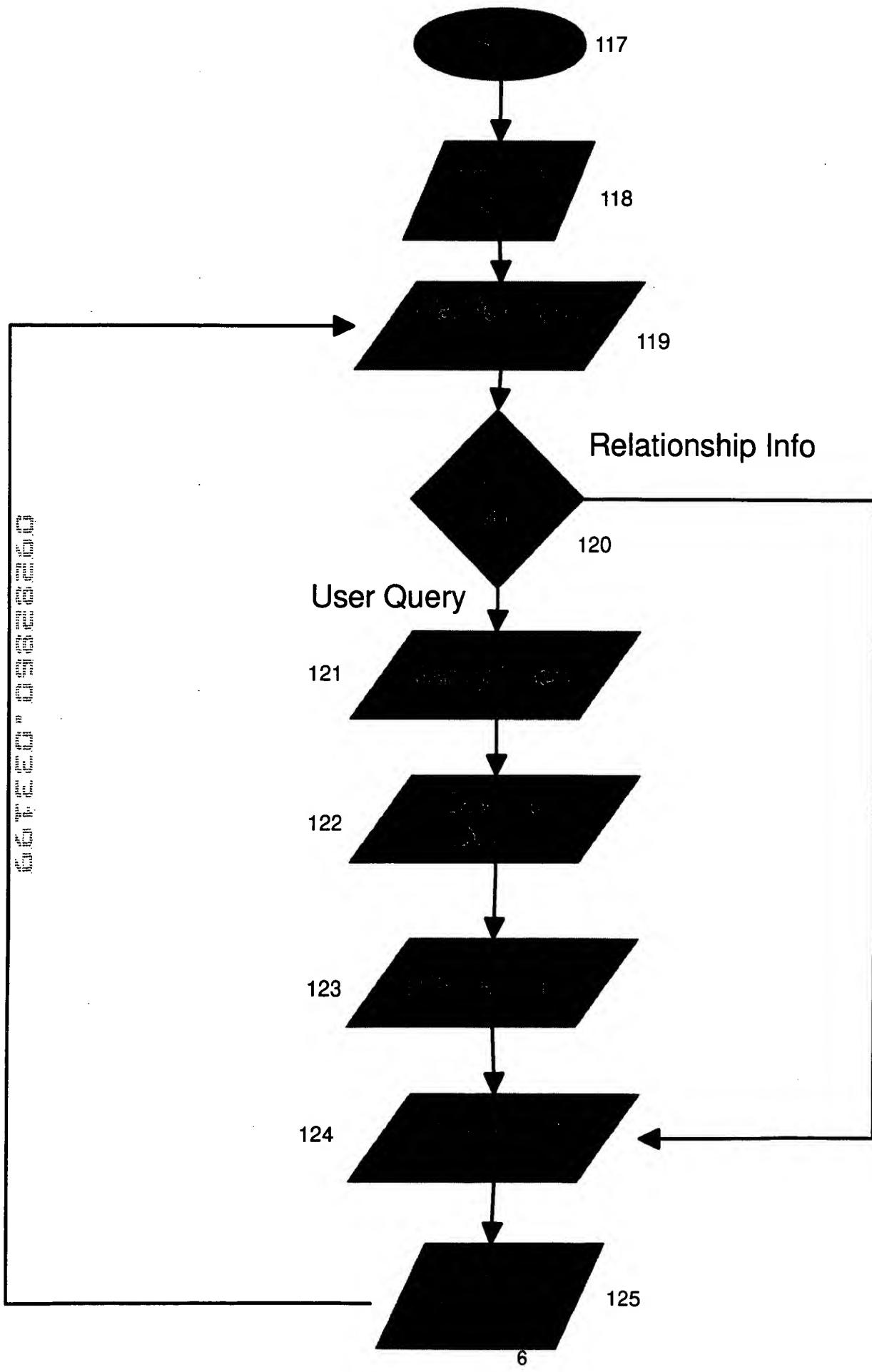
Sorted Response

John P Smith	John P Smith/MktgDivision/XYZCorp
John Q Smith	John Q Smith/SalesDivision/XYZCorp

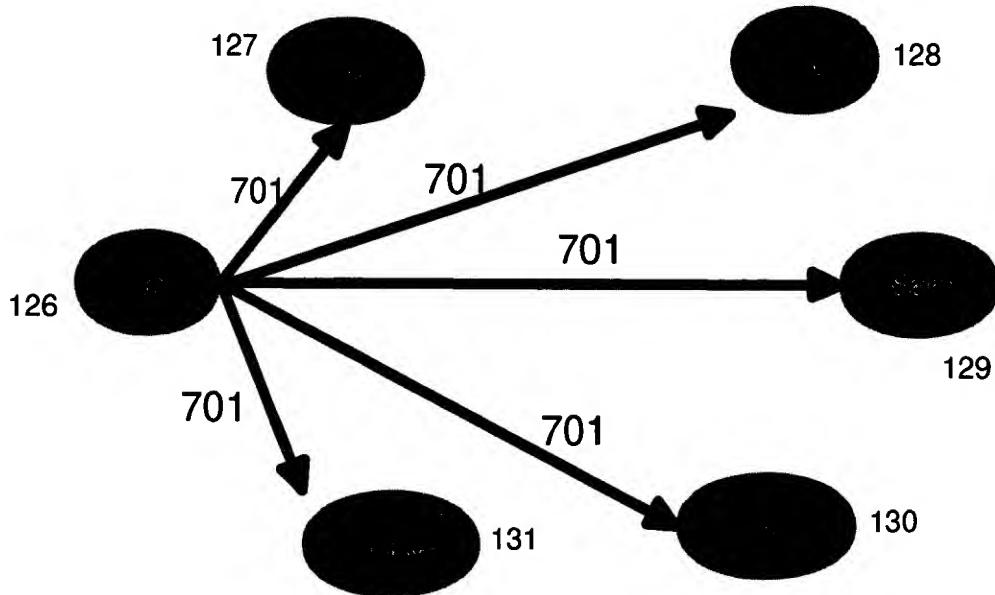
116

Figure 5B

## Figure 6 - Operation of the RA



# Figure 7A - Sample Relationship Graph



### Relationship Values for "Jo" (700)

	<u>Fred</u>	<u>Pat</u>	<u>Sam</u>	<u>Al</u>	<u>Mickey</u>
Ri("Org Chart")	0.8	0.5	0.5	0.1	0.0
Ri("Mailing List")	0.7	0.6	0.2	0.0	0.5
Ri("Calendar")	0.2	0.6	0.6	0.0	0.1
R("Jo") (sum Ri's)	1.7	1.7	1.3	0.1	0.6

### Preference ratings for information sources (702):

$$\{ P("Org Chart") = 0.2, P("Mailing List") = 0.5, P("Calendar") = 0.3 \}$$

### Weighted Relationship Values (703)

$$Rp("Jo", ( Fred... )) \quad 0.57 \quad 0.58 \quad 0.38 \quad 0.02 \quad 0.28$$

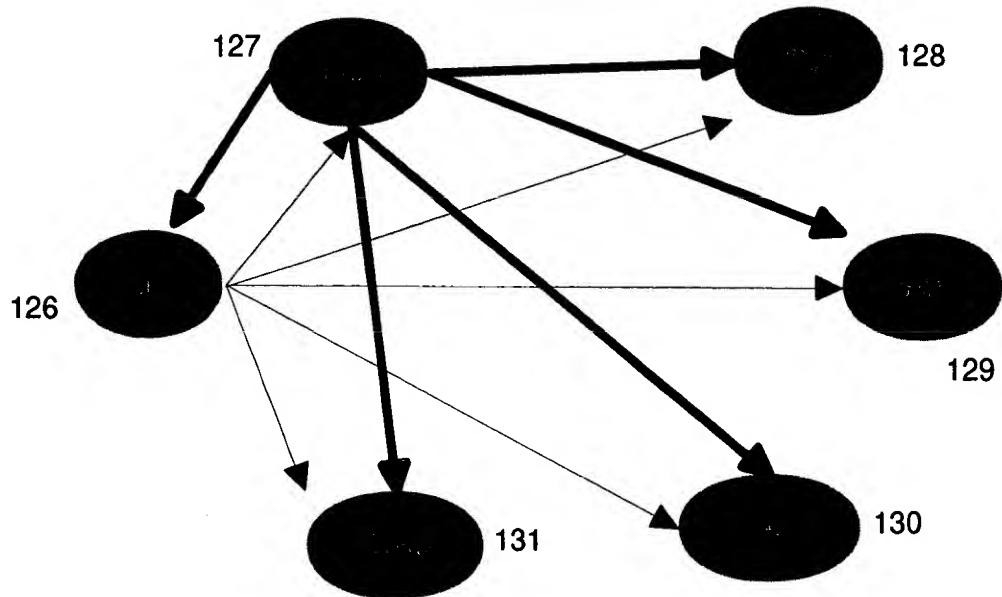
### Relation-Group Cutoff (704)

$$RG \text{ cutoff} = 0.35$$

### Relation-Groups For "Jo" (705)

$$RG("Jo") = \{ Fred, Pat, Sam \}$$

# Figure 7B - Sample Derived Relationship Graph



### Weighted Relationship Values for Fred (706)

	<u>Pat</u>	<u>Sam</u>	<u>Al</u>	<u>Mickey</u>	<u>Jo</u>
Rp("Fred", y)	0.4	0.6	0.2	0.8	0.6

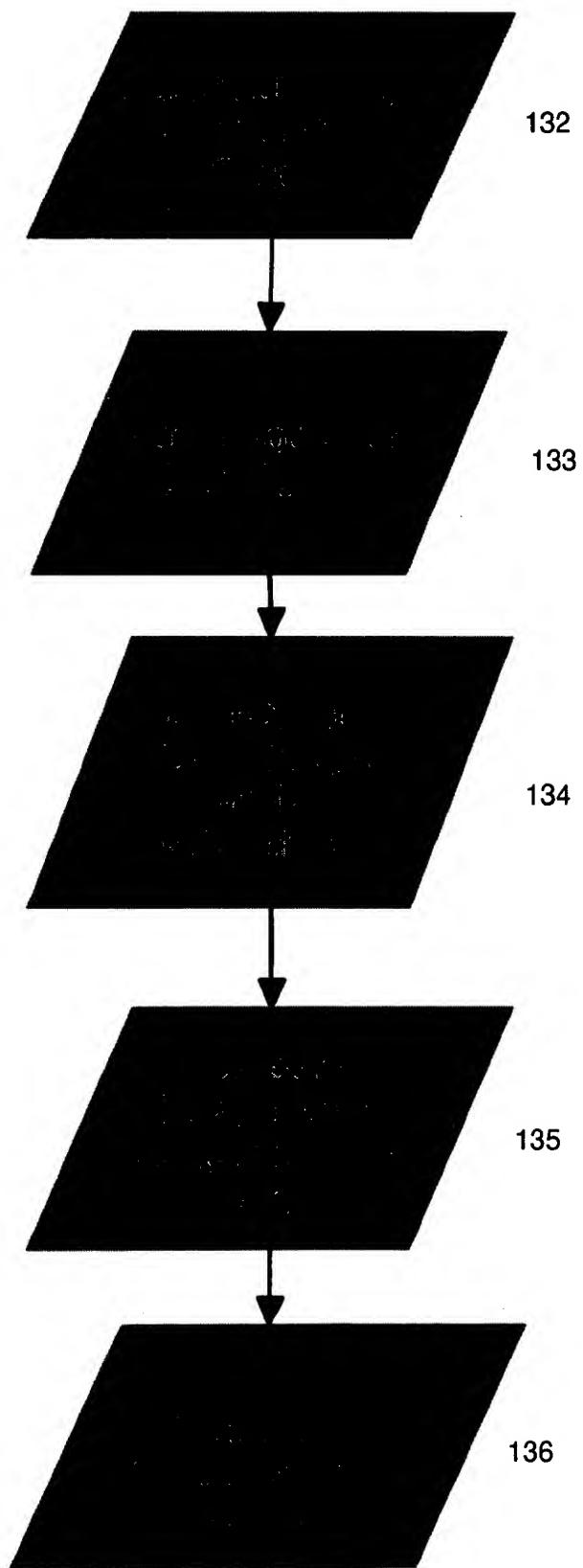
### Derived Relation-Group Cutoff (707)

DRG cutoff = 0.5

### Derived Relation-Group For Jo (708)

DRG("Jo") = { Fred, Pat, Sam, Mickey }

# Figure 8 - Initialize RD



# Figure 9 - Compute Relationship Values

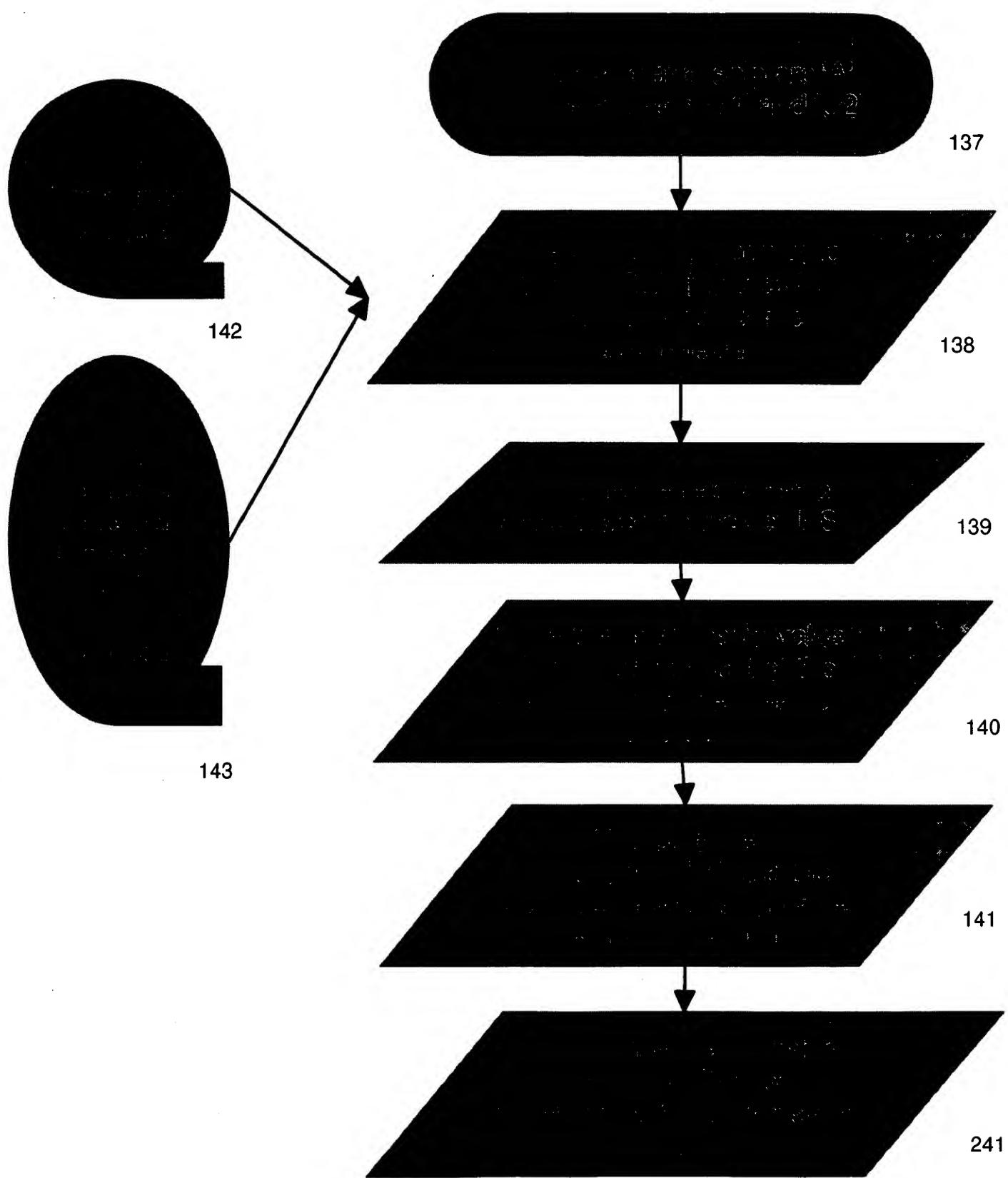


Figure 10 - Modify Query

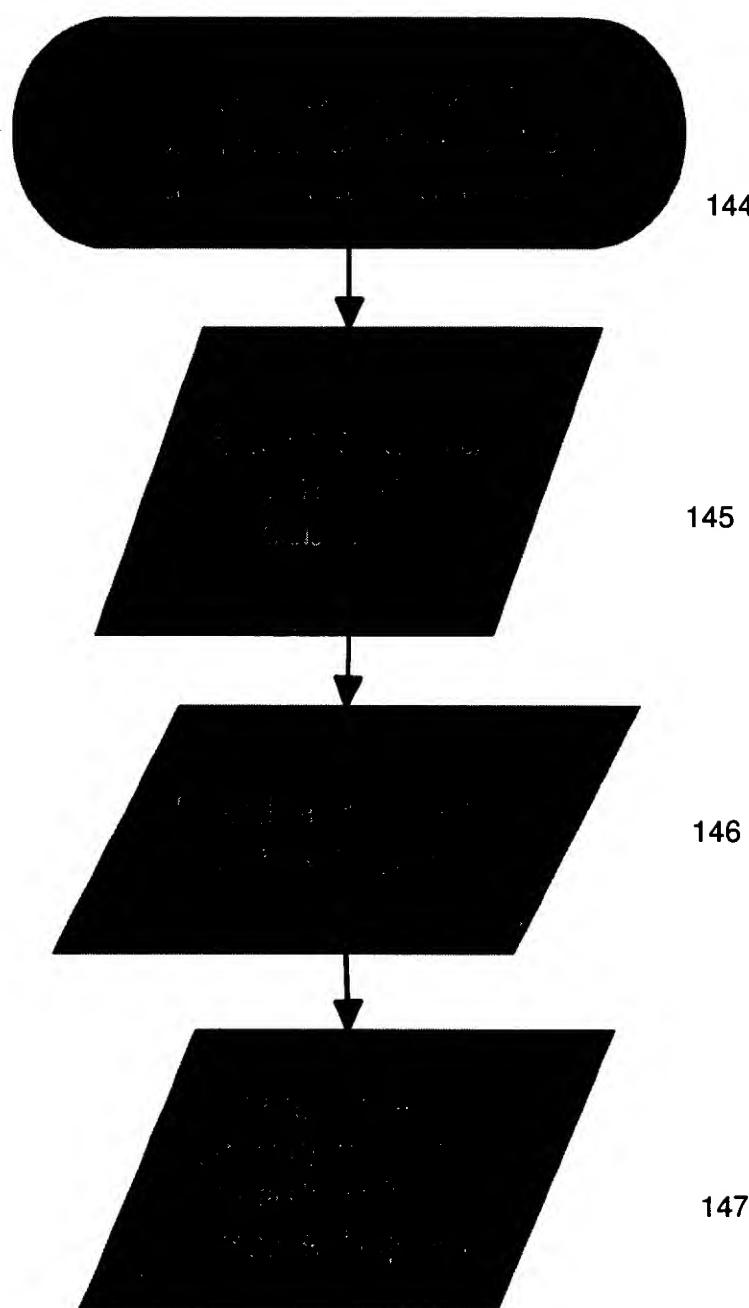
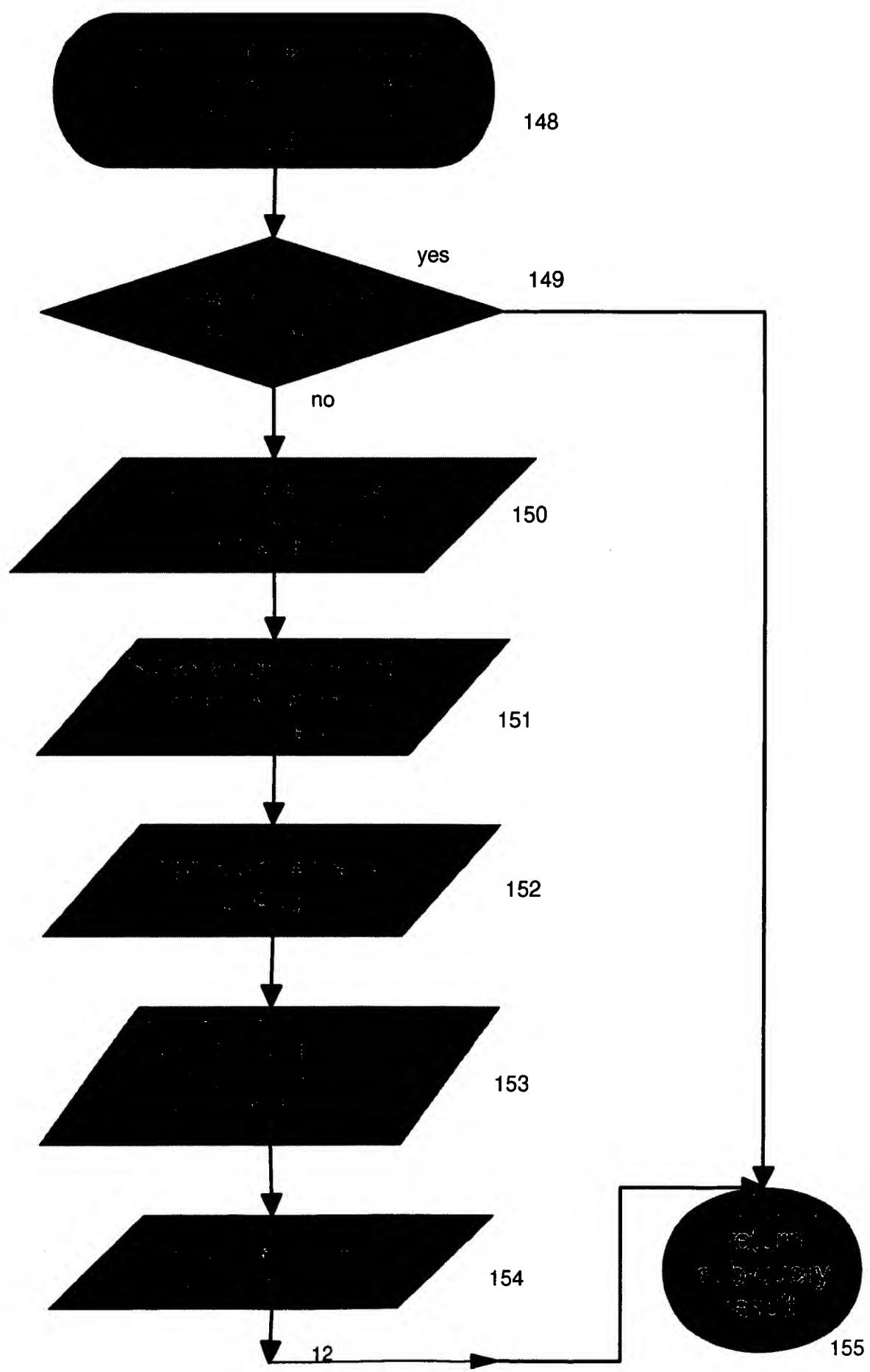


Figure 11 - Execute Query



## Figure 12 - Filter Results

